

Leukocytic Membranes as Electron Re-circulators and Inducers

Pierre L. Coulomb
2026 June 15

Although some nontrivial progress has been made in understanding the dynamics of the immune system, the precise mechanisms used by T-cells/leukocytes to identify and neutralize viral and bacterial bodies and to communicate with one another, currently held to be purely chemical, may have an unseen electrical/inductive component crucial to their mode of function.

In most living cells, it has been observed that changes in electrical charge around certain proteins act as gateways which allow for semi-permeability. In most cell types, the charge of the various, proteins of the cell membrane remains mostly stable.

As T-cells need to create spatio-chemical maps of the spike proteins of potential pathogens, it would make sense for the membranes of the T-cells and the leukocytes, themselves, to feature a rapidly rotating electrical charge in which electrons are actively circulated around the membrane of the T-cell like an ocean current around the planet. T-cells, rather than reading the contents of the spike proteins through chemical means, I would propose, infer the chemical/structural properties by measuring voltage impedance. This is the only method which would give information about both chemical and structural properties. The T-cell membranes are adhering to each area, passing current through the spike proteins and then measuring how much current makes it through in order to make inferences.

This electrical current is what allows these immune cells to both detect and quantify the presence of spike proteins and to universally prevent the assimilation of T-cells by pathogens, which may attempt to inject genetic material into T-cells but are unable to do so.

This circulation of electricity likely creates an induction field which is at least partially responsible for attracting additional immune cells when an infection is detected. Current doctrine holds that such signalling is purely chemical, but the idea that immune responses to local areas is purely chemical seems incomplete given that a simple chemical signal is agnostic to direction. A chemical signal cannot tell a neighboring cell in what direction it must travel to get to the area where it is needed, but an induction field could.

That same mechanism of rotating electrons when combined with induction fields of neighboring immune cells could allow for a type of ionic propulsion which has not yet been identified in biological cells. For example, if electrons are, by default, actively recirculating in the membranes of immune cells (much like an electromagnet,) then circulation within one local hemisphere of a (roughly) round body would result in propulsion in the direction opposite to the hemisphere with the greater electron load.

This hypothesis is further-supported by the observed aggravating effects of hypoxic environments upon autoimmune disorders. Oxygen has an immunomodulatory effect, most likely, because oxygen molecules tend to act as electron donors, which could be predicted to create a net charge surplus in immune cell membranes relative to their interior, which could be predicted to interfere with the natural induction/circulation mechanism which undergirds their mode of function.